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Parallel transitive closure of a directed graph

Introduction

Our group, Eric Cuiffo, Nick Palumbo, Val A. Red, and Aiser Sheikh, examined parallel transitive closure of a directed graph via Warshalls algorithm utilizing implementations of multiprocessing via shared memory and semaphores as well as multithreading via POSIX pthread and mutex locks. Our code, also included in this directory, may be made via the "make" command and similarly removed via the "make clean" command. Possible executions of our "wtc" command our as follows:

Process-level concurrency

```
./wtc 1 input.in
```

Thread-level concurrency

```
./wtc 2 input.in
```

Process-level concurrency - Bag of tasks

```
./wtc 3 input.in
```

Thread-level concurrency - Bag of tasks

```
./wtc 4 input.in
```

Data gathered from our implementation will be discussed in this report.

Time Measurement Graphs:

Recommended format:
Vertices Size: 32, 64, 96, 128, 168, 192, 224, 256, 288, 329, 352, 384, 416, 448, 480, 512, ... 1024
Process/Thread Size: 2, 8, 32, 128, 512,
Remember to less /proc/cpuinfo
To be continued...